

REMARKS

In response to the Official Action dated February 8, 2006, Claims 1, 18, and 34 have been amended to more particularly point out the invention that is disclosed in the subject application. Applicant is filing a terminal disclaimer to obviate the provisional rejection based on Application No. 10/001,730 in view of Nystrom, Andres and Channey as applied in the Official Action.

In the Official Action dated February 8, 2006, the pending claims were rejected under 35 U.S.C. §103(a) based on eight references that were applied in no less than fifteen different combinations. The Applicant respectfully submits that the mere number of these combinations strongly suggests the non-obviousness of the invention. However, even with that array of references, the Official Action fails to reconstruct the claimed invention.

Claim 1 as presently amended is patentable in that, among other reasons, it requires:

A deck plank made of a composite of a polymer material consisting of polyvinyl chloride that is formed with internal closed cells and glass fibers that are imbedded in the closed cell polyvinyl chloride

Claim 18 is patentable, among other reasons, in that it requires:

A composite deck plank made according to the process comprising the steps of:
blending a polymer material consisting of polyvinyl chloride with glass fibers that have a screen size in the range of 1/64 inch to 1/4 inch to make a polyvinyl chloride/glass melt in which the glass fibers are imbedded in the polyvinyl chloride;

Claim 34 is patentable, among other reasons, in that it requires:

*A composite deck plank made according to the steps comprising:
providing a feed mixture to an extruder, said feed mixture
including a polymer material consisting of polyvinyl chloride and
glass fibers, said polyvinyl chloride being in an amount of about
82% to 99% by weight of the mixture and said glass fibers being in
an amount of about 1% to 18% by weight of the mixture;*

None of the applied references, either alone or in combination, make Claims 1, 18 or 34 unpatentable.

The Official Action combines Detterman (5,789,453) in various ways with seven other references to support the claim rejections. In every combination, Detterman is the primary reference. Detterman describes a composition of chlorinated polyvinyl chloride ("CPVC"). Detterman does not describe or suggest the use of "*a polymer material consisting of polyvinyl chloride*" as required by Claims 1, 18 and 34.

As used in Claims 1, 18 and 34, the clause "a polymer material consisting of polyvinyl chloride" excludes other polymers in combination with polyvinyl chloride. The phrase "consisting of" excludes any element, step, or ingredient not specified in the claims. *In re Grey*, 53 F.2d 520, 11 USPQ 255 (CCPA 1931); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948). The term "consisting of" when used in a clause of a claim rather than immediately following the preamble limits the element set forth in that clause. *Mannesmann Demag Corp. v. Engineered Metal Products Co.*, 793 F.2d 1279, 230 USPQ 45 (Fed. Cir. 1986).

Detterman does not describe "a polymer material consisting of polyvinyl chloride" as required by Claims 1, 18 and 34. Detterman describes a chlorinated polyvinyl chloride

("CPVC") composition. Detterman distinguishes CPVC compositions from polyvinyl chloride ("PVC") compositions. Throughout the reference, Detterman identifies and discusses CPVC as a composition that is distinct from PVC. Indeed, Detterman teaches that CPVC is made from PVC! That teaching (which incorporates the very excerpt from Table 1 that is cited in the Official Action) merely confirms the fact that CPVC and PVC are recognized in the art as different compositions!

The Official Action concedes that Detterman does not specifically disclose various requirements of Claims 1, 18 and 34 such as the amount of glass fiber or the amount of blowing agent.

To support its rejection, the Official Action relies on citations to Detterman that merely suggest that reinforcing agents such as glass fibers, the quantity of blowing agent, the extruder temperature, and extruder screw speed can be varied for CPVC compounds to achieve an (undefined) intended purpose. Such "obvious to try" arguments do not make the claimed deck plank unpatentable. If the prior art merely discloses numerous possible combinations but gives no direction as to which of those many choices is likely to be successful, it does not constitute a suggestion that makes the claim unpatentable. *In re Antonie* 195 USPQ 6 (CCPA 1977). Significantly, nothing in Detterman teaches that any quantity of glass fibers or blowing agent should be added to a "polymer material consisting of PVC." Detterman teaches only the use of CPVC and combinations thereof.

The Official Action improperly attempts to rely on a presumption that the claimed ranges are unpatentable unless Applicant demonstrates unexpected results. The Official Action cites *In*

re Aller, 105 USPQ 233 (CCPA 1955) to support that contention. However, *In re Aller* applied to the situation where the applicant's process was identical to that of the prior art except for variations in temperature and ingredient concentrations. In *In re Aller*, the proposed combination had met the ingredient limitations of the claim and the point of novelty was said to be in optimum ranges of temperature and ingredient concentrations. *In re Aller* circumstances do not exist in this case. The Applicant's PVC product is not identical to the CPVC product of the cited prior art. The differences are not a matter of ingredient concentrations. The differences are in the identity of the ingredients themselves! The CPVC of Detterman is not PVC. Nothing in the Application supports a conclusion that a CVPC plank would be the result of the claimed process. Therefore, *In re Aller* is inapposite to Claims 18 and 34 and there is no burden on the Applicant to show unexpected results. Rather, the burden remains on the Patent Office to demonstrate how the differences between the claimed invention and the combination of references is unpatentable.

Claims 18 and 34 are product-by-process claims. The Official Action relies on *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1983) to dispute the patentability of those claims irrespective of any differences in the process. The premise for applying *In re Thorpe* is that the products of Claims 18 and 34 is the same as the product of the combination of references as put forth in the Official Action. However, *Thorpe* is inapplicable in this circumstance. In *Thorpe*, the Applicant conceded that the product of his process was the same as the product of the prior art method. In this application, the Applicant does not so concede. The Applicant asserts that the products are decidedly different – the product proposed by the Official Action is a CPVC and the product of Claims 18 and 34 is a PVC. Assuming that the collection of references could

properly be combined according to the Official Action, the combination would result in a CPVC plank. As previously explained, the claims require a PVC plank. No proper reading of Thorpe supports a theory that process steps can be ignored when, as here, the reference results in a product that is different than the product that is claimed.

To support the rejection of various dependant claims, the Official Action variously combines other references with Detterman and Nystrom. However, none of those additional references make any of the claims unpatentable.

The Official Action's combination of Detterman with the seven other references is improper. To support an obviousness conclusion, there must be a teaching or motivation to modify the reference to the claimed invention. *McGinley v. Franklin Sports, Inc.*, 60 USPQ2d 1001 (Fed. Cir. 2001). The Official Action does not suggest what teachings support the various combinations that are proposed. In making such combinations of multiple references, the Official Action clearly relies on the subject Application as a road map for assembling a mosaic of references to try to reproduce the invention as specified in various claims. Even if such combinations were proper (which they are not), the claimed invention does not result. No combination of the references produces "*a composite of a polymer material consisting of polyvinyl chloride*" as required by the claims.

The patentable differences between Detterman and Claims 1, 18 and 34 are not made unpatentable by any combination of Detterman with the other references. No combination of Detterman with Nystrom produces a deck plank of a polymer material consisting of polyvinyl

chloride. Nystrom does not describe a polymer material. Nystrom describes a wooden plank. It is cited in the Official action for the shape of its profile - not for its composition.

As explained in Applicant's previous response, none of Koffler, Patterson, Guntherberg, or Ittel describe closed cell PVC such as required by the claims. Koffler (6,818,676) is directed to a foam composition for use in cushion materials such as carpet padding. It is cited for its recitation of a physical blowing agent. Applicant has found no suggestion as to how that composition could be used in constructing deck planks or how the blowing agents therein described could be combined with other compositions that are used in deck planks.

Patterson (6,784,230) is directed to compositions wherein vinyl chloride resin is combined with a cellulosic material. The subject application specifically teaches away from the use of such compositions for decking making the combination of Patterson improper. Patterson is applied for its recitation of a chemical blowing agent. Applicant has found no suggestion as to how the blowing agents therein described could be combined with other compositions such as described in the other cited references or in the subject application.

Guntherberg (6,566,436) is directed to a thermoplastic molding composition for use in garden buildings, garden equipment, garden furniture, garden accessories, and stock fences and animal cages. It is not apparent how the composition described in Guntherberg could serve as a useful decking material. Guntherberg is cited for its use of reinforcing glass fibers of particular dimensions in the composition therein described.

Ittel (2005/0058822) concerns a composition wherein lignocellulosic or cellulosic material is combined with a synthetic fiber. The subject application specifically teaches away

from the use of cellulose compositions such as taught in Ittel making the combination of Ittel improper. The Official Action relies on Ittel with regard to the length of glass fibers as disclosed therein.

The Official Action also rejects all of the pending Claims under 35 U.S.C. §103(a) as being obvious over Detterman in view of Andres alone or in further combinations with Channey, Koffler, Patterson, Guntherberg, and Ittel

Like Detterman, none of Andres, Channey, Koffler, Patterson, Guntherberg, or Ittel describe a PVC foam with internal closed cells and glass fibers that are embedded in the closed cell PVC. Furthermore, none of those references describe or suggest a deck plank wherein the closed voids define 30% to 70% of the volume that is defined between top, bottom and side surfaces of the plank. The Official Action contends that "it is readily apparent" that the CPVC foam of Detterman would have a closed cell content from 30% to 70% by volume, but the Official Action offers no citation to Detterman to support that contention.

Koffler, Patterson, Guntherberg and Ittel are discussed above. Andres (426,320) is a plank with an open profile. Internal closed cells in the composite material do not account for 30% to 70% of the volume defined by the plank surfaces. Chaney (422,718), like Andres, also is a plank with an open profile wherein internal closed cells in the composite material do not account for 30% to 70% of the volume defined by the plank surfaces.

Andres and Chaney are open structures. They have top and bottom surfaces and side surfaces, but the volume defined within those surfaces is mostly open space. Accordingly, the volume of internal closed cells is far less than the 30% to 70% range of the volume defined by

the plank surfaces as required by Claims 1, 18 and 34. Support for that claim language is found at page 11, lines 28-30 of the Application.

There is no merit in the Official Action's contention that Figures 6 and 7 of Andres Andres show a bottom surface that defines a concave surface with a generally continuous arc between first and second side surfaces. Those Figures depict three orthogonal walls that are joined by radiused corners.

There is no merit in the Official Action's contention that Serial No. 10/001,730 describes a "carrier material as set forth in Claims 23 and 24. The Official Action relies on Claim 7 of Serial No. 10/001,730 for support for this contention. But that claim only references the blowing agent. The "carrier material" is not the "blowing agent" and is not described in Serial No. 10/001,730. As explained in the Application:

To better regulate the proportion of foaming agent that is introduced within more precise limits, the foaming agent is pre-blended with a carrier material so that the foaming agent composes a selected, proportional amount of the blended mixture. Suitable carrier materials for use in such a pre-blended mixture are calcium carbonate, polyvinyl chloride, or ethylene vinyl acetate. (Page 11, lines 18-22)

Accordingly, Claims 23 and 24 are patentable for that additional reason as well.

Claims 2, 4, 6-8, 19-24 and 35-44 all depend from Claims 1, 18 or 34. Accordingly, Claims 2, 4, 6-8, 19-24 and 35-44 are patentable for the same reasons as stated with respect to Claims 1, 18 and 34.

Serial No. 10/800,501

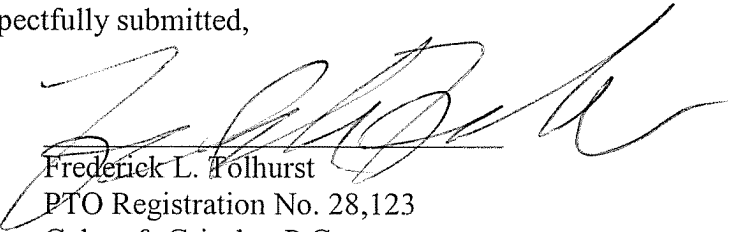
Amdt. and Request for Consideration dated August 7, 2006

Reply to Office Action of February 8, 2006

Accordingly, Claims 1, 2, 4, 6-8, 18-24, and 34-44 are believed to be in condition for allowance and such allowance is hereby respectfully requested.

Respectfully submitted,

By



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